

NASAL INTUBATION ADJUNCT

This application is a continuation of application Ser. No. 265,213 filed Oct. 31, 1988, now abandoned 5 1/12/90.

FIELD OF INVENTION

A medical device designed to improve nasal airway tube placement.

DISCUSSION OF PRIOR ART

U.S. Pat. No. 2,463,149, Mar. 1, 1949, C. W. Caine—Endotracheal Intubation Stylet—provides shaping and direction for the oral placement of endotracheal tubes but its rigid design makes it undesirable to be used in nasal endotracheal intubation. 15

U.S. Pat. No. 3,314,431, Apr. 18, 1967, R. M. Smith, Jr.—Stylet for insertion of endotracheal catheter—is similar in that it provides a means of manipulating the distal end of an endotracheal tube but is substantially dissimilar since it is rigid and the distal end doesn't have the ability to conform to individual variations in anatomy making it undesirable to be used in nasal endotracheal intubation. 20

U.S. Pat. No. 3,754,554, Aug. 28, 1973 (no name listed)—Endotracheal tube means—is a rigid device suitable only for oral intubation and not suitable for nasal endotracheal intubation. 25

U.S. Pat. No. 3,957,055, May 18, 1976, Gerald S. Linder—Catheter guide—is a rigid device suitable only for oral intubation and not suitable for nasal endotracheal intubation. 30

U.S. Pat. No. 4,185,639, Jan. 29, 1980, Gerald S. Linder—Adjustable stop for endotracheal tube guide—Similar only by providing a way to position the tip of a stylet just inside the tip of an endotracheal tube but substantially dissimilar since it fits a rigid stylet and provides no assistance in placing an endotracheal tube nasally. 35

The American Optical Laryngoscope Model 1650 does provide a means of guiding an endotracheal tube through a patient's glottic opening by first visually placing the end of the fiber optic flexible shaft through the nasal passage, over the hard palate and soft palate, into the posterior nasal pharynx then oral pharynx and through the glottic opening. The endotracheal tube is then slid over the flexible shaft into the patient's airway. It is substantially dissimilar since the American Optical scope can't manipulate the endotracheal tube and doesn't provide visual/audible confirmation of proper tube placement. 40 45 50

The "Tubestat" lighted stylet marketed by Concept Corp., Clearwater, Fla., 1-800-237-0169, provides a bright light at the end of the nasally placed endotracheal tube to help guide the tube midline. It is substantially dissimilar since it doesn't manipulate the endotracheal tube and doesn't provide audible confirmation of proper tube placement. 55

SUMMARY OF THE INVENTION

Accordingly several objects and advantages of my invention are: to provide a medical device giving better control of a nasally placed airway tube conforming it to the patient's anatomy thus minimizing soft tissue trauma and allowing the distal tip of said nasally placed airway tube to be more accurately placed adjacent to the patient's glottic opening, to provide a medical device with 65

a simple means of attaching said nasally placed airway tube to allow for rapid removal of the nasal intubation adjunct from the airway tube as soon as proper placement of said nasally placed airway tube is confirmed, to provide a medical device affording confirmation of proper placement of the distal tip of said nasally placed airway tube adjacent to the patient's glottic opening, when appropriate, by increased audible sounds transmitted to the user's ears through a stethoscope headset attached to the nasal intubation adjunct, to provide a medical device that will allow adequate movement of the patient's inspired and expired air if said nasally placed airway tube is placed through the patient's glottic opening into the patient's trachea, to provide a medical device allowing confirmation of accurate placement of said nasally placed airway tube in the patient's trachea, if appropriate, by audible and visual means, to provide a medical device that will allow the user a safe working distance from the patient's face for better visualization of tube placement plus reducing the risk to the user of contamination from a diseased patient, to provide a medical device that will allow for adjustability to accommodate a wide range of said nasally placed airway tubes. 10 15 20 25

DRAWINGS

FIG. 1 shows a perspective view of the entire device.

FIG. 2 shows a view of the device attached to an endotracheal tube (shaded) successfully placed nasally into patient's airway.

FIG. 3 shows a side view of the device's main body.

FIG. 4 shows a sectional view of the device's main body with the section indicated in FIG. 3 along the line 4-4.

FIG. 5 shows a sectional view of the device's main body with the section indicated in FIG. 6 along the line 5-5.

FIG. 6 shows a rear view of the device's main body.

FIG. 7 shows a perspective of the slide track.

FIG. 8 shows a front view of the manipulator actuating/positioning system in FIG. 9 without hidden lines in illustrate slot 18.

FIG. 9 shows a side view of the manipulator actuating/positioning system.

FIG. 10 shows a bottom view of clamp 19.

FIG. 11 shows a side view of the manipulator assembly with an indication of movement when braided wire 28 is pulled.

FIG. 12 shows an enlarged sectional side view of the manipulator.

DETAILED DESCRIPTION

The nasal intubation adjunct consists of a body FIGS. 3, 4 5 and 6 which can be cast as a unit or constructed from its several component parts. Fitting 3 at the bottom is bored vertically with a hole 15.5 mm in diameter with said hole communicating with a hole of similar diameter bored horizontally across the device to form tubes 8 and 9 which should be transparent. Hole 11 is drilled centrally and vertically from the top slightly larger than the outside diameter of the manipulator FIG. 11 to communicate with the holes in tubes 8 and 9 and fitting 3. One-way valves 13 and 14 are placed in positions in tubes 8 and 9 to be visible looking at the sides of transparent tubes 8 and 9. One-way valve 13 should be inserted to allow air movement into tube 8 while one-way valve 14 should be inserted to allow air movement out of the device through tube 9. Port 7 is 70